Departments and Societies

Gerald "Jerry" Fries, E.E. III. Departmental Editor

Note: If your organization is not represented here, present a report to the staff.

A. I. Ch. E.

Bill Verross was elected junior representative to the Engineering Council at a special meeting of the student branch held November 27. Ed Willing, who was junior representative to the Council last year, will continue as the senior representative this year. Plans for the Makio picture, intramural sports and other miscellaneous business were discussed at the meeting.

A. S. M. E.

The American Society of Mechanical Engineers has had two outstanding speakers in this Autumn Quarter. On October 31, Professor Rowntree of the Economics Department showed color slides and told about his recent trip in western United States and Canada. At the meeting of November 7, Patrolman Schmieg of the Ohio State Highway Patrol discussed the elements of safe driving.

The meeting of November 12 consisted of a student-faculty smoker, with cigar-smoking and pie-eating contests for entertainment. The faculty seemed to be the better smokers but the students redeemed themselves in the pie-eating contest.

A. W. S.

On November 15, the American Welding Society held a combination hayride and weiner roast, arranged by Tom Broughton. Professor and Mrs. Stitt accompanied the group as chaperons. However, it is reported that a "lovable time" was had by all.

A. I. E. E.

At the meeting of October 30, Jack Cummings was elected to the office of Senior Vice-Chairman. Jack has been with the General Electric Company for the past year and has come back to complete his course of study in EE.

On November 6, "Chief" Younger, Chairman of the Department of Industrial Engineering, gave a very interesting talk on the subject of "Mass Production". A petition regarding the institution of the "Honor System" in the Department of Electrical Engineering was discussed. It is hoped that if this system succeeds in this department it will be adopted by other departments in the College of Engineering.

A. S. C. E.

A delicious steak dinner was served at the joint meeting of the Central Ohio Section and Student Chapter of the American Society of Civil Engineers, Thursday, November 13, 1941 at 6:30 p.m. in Pomerene Refectory.

Joe Motz, president of the Student Chapter, introduced all the students. Mr. Youngquist, president of the Central Ohio Section then turned the meeting over to Prof. Morris, chairman of the Department of Civil Engineering, who in turn introduced all the past presidents of the Central Ohio Section. Each of the past presidents gave a short reminiscence of the time they were in office.

Without warning a lighted birthday cake was brought in to commemorate the 20th anniversary of the founding of the Central Ohio Section. Later in the evening the cake was "sold" and the lucky one was none other than our own Mr. Hawley. For further details as to what became of the cake see Mr. Hawley. Due to the worthy efforts of George McSteen, a Makio photographer was on hand to snap a few pictures.

The guest speaker for the evening was Mr. James Jagger, the new field secretary for the national organization of the A. S. C. E., and a domesticated yankee from Birmingham, Alabama.

His topic for the evening embraced the functions of the national organization, and "Maintenance".

The Senior Chapter of the A. S. C. E. exists primarily for the advancement of sciences and civil engineering. The work of the technical divisions falls under 90 sub-committees who publish manuals on practices. There are 22 of these manuals available.

Publications include: "Civil Engineering" and "Proceedings of the American Society of Civil Engineers" including "Transactions".

Engineering Registration Laws guarantee a high degree of professional work, the type of work the public may depend upon.

The finest technical library in New York City houses 150,000 volumes available through a loan service to the senior members of the A. S. C. E.

In closing, Mr. Jagger stressed the importance of local sections and joint meetings.

Another joint meeting was planned for early December.

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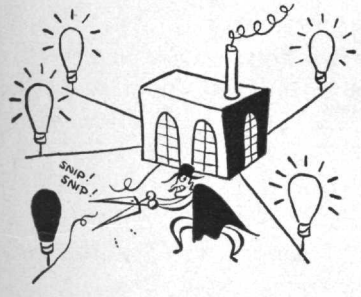
When power must not fail!

How a Westinghouse Distribution System Foils Lightning, Accidents, and Saboteurs

BEHIND America's urgent defense production, stands electric power. It runs the machines that turn out the weapons for the defense of America. It must not fail, must not even falter.

In the first World War, this vital power could be cut off, and cut off easily . . . by saboteurs, by accidents, or by lightning.



▶For, in those days, the *only* means of distributing electricity was through *radial* systems, in which the power lines radiated like the spokes of a wheel with the power station as the hub. So, if *any part* of a power line were damaged, no electricity could be delivered to users *all along the line.*

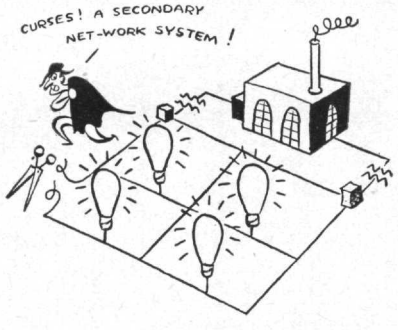
No way was known to reduce the vulnerability of power distribution until the early '20's, when engineers of a large power company conceived the idea of the *secondary network system.*

▶The idea was to connect low voltage secondary lines in a *network*, with the main power (primary) lines joined to the network at several places. Thus, with power being sent along several different routes, a line could be damaged and electricity would continue to flow to its users along the other routes.

It was a great idea . . . if it could be made to work on large and complicated city systems. That was the problem, a problem which the power company brought to Westinghouse engineers.

▶The secondary network system wouldn't work at all until some pump-proof method was found to keep power from flowing backwards into a damaged section of the line. Westinghouse engineer John S. Parsons (a member of Georgia Tech's class of '21, a graduate of the Westinghouse Training Course, and the holder of 30 of the 150 patents on secondary networks) found the way . . . a pump-proof relay which, when power is flowing in the wrong direction, closes its contacts and causes a network protector (automatic air circuit breaker) to trip and cut the feeder off the line.

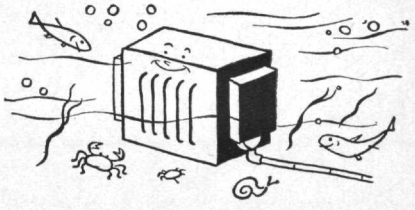
Then, there was the question of where to put the transformers, relays, and protectors that secondary networks needed. The amount of space this equipment would take up would be tremendously expensive in crowded cities.



▶The obvious way to overcome this obstacle was to put this secondary network equipment underground. But transformers, relays, and protectors wouldn't perform properly in damp underground atmosphere. Westinghouse engineers went to work and developed a transformer-relay-protector unit that could fight off dampness and perform as well underground as above ground! Now, there are network units that do their job even though submerged under salt water, twice a day!

To make doubly sure that they had the space problem licked, Westinghouse engineers cut down the size and stepped up the power capacity of these network units. They made it possible for a unit that was one-third smaller to do the same electrical jobs!

▶Secondary networks raised all sorts of new problems. And Westinghouse engineers had to find a lot of new answers before they were able to bring secondary networks from an idea to a working distribution system.



Today, Westinghouse engineers have brought secondary network systems to 164 cities. They've adapted these systems to the specialized needs of defense plants, army camps, airports, and power houses. Their work has contributed tremendously to today's ability to distribute unfailing electric power . . . despite lightning, accidents, and sabotage.

★ ★ ★

▶This story illustrates how Westinghouse engineers work. More than that, it shows how the Westinghouse Company works. For there are 1,500 engineers in Westinghouse . . . in service, in management, in design, in sales, in every single branch of the business. These engineers give the company its point of view.

Westinghouse takes pride in the engineering behind its products. Its engineers are always analyzing its products, working over them, making them better. It has the engineer's impatience with the old and his eagerness to create the new.

▶Engineers founded and built Westinghouse. Engineers will carry it on.

WESTINGHOUSE

Westinghouse

Westinghouse Electric and Manufacturing Co., Pittsburgh, Pa.

DEPARTMENTS and SOCIETIES

(Continued from Page 18)

S. S. I. E.

At a dinner meeting in Pomerene Hall, November 26, the Student Society of Industrial Engineers had as guest speaker, Major R. D. Salisbury, assistant 5th corps area engineer of the Army Engineering Corps. Major Salisbury spoke on the subject, "What the Engineer Does in the Army." To illustrate the speaker's remarks, sound movie films were shown by Walter Zaggy, Art and Photography editor of **The Ohio State Engineer.**

In a short business meeting, society President Henry Fraboni stressed the desire for all sophomores, juniors, and seniors in the industrial engineering department to become members of the organization. In a statement to these students he says, "Let's make this year a noteworthy one by having a 100% membership. Many advantages and benefits are gained by the students who are members, so let's not delay another day in joining."—R. D.

THE OHIO STATE RADIO CLUB

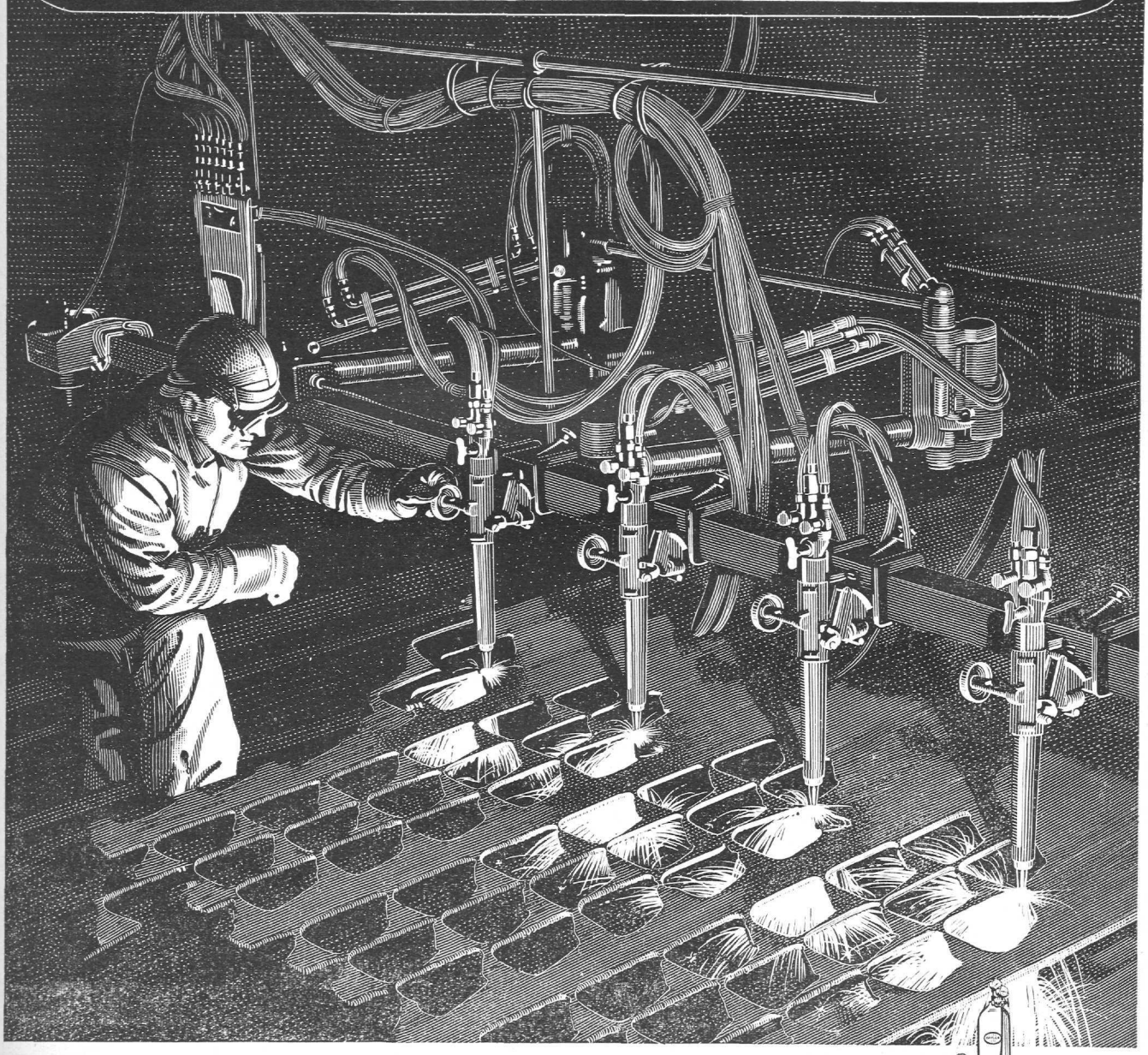
After a lengthy discussion of the revision prepared by Jerry Fries and Murray Bevis, the Radio Club recently adopted a new, streamlined constitution for the government of the club. Fries and Bevis, together with Jerry Foley, W8UKI, technician, are formulating a set of by-laws to supplement the new constitution.

By means of a neat bit of detective work, Treasurer Fred Truman, W8LZC, managed to locate and purchase a lock for the shack door. The new lock, strangely enough, opens only when the correct combination is performed. The club is considering the purchase of some new crystals and of some tools.

Ed. Jordan, of the department of Electrical Engineering, has been chosen to be faculty advisor for the club. At a recent meeting, Phil Dunson, W8RVG, was elected vice-president to fill the vacancy arising from the resignation of Ray Wilbeck, who is not enrolled in the University this quarter.

The newly-adopted plan of meeting every Tuesday evening has received the approval of the club members and will be continued indefinitely. A dinner meeting is scheduled to be held soon.

FLAMES ARE THE CUTTING TOOLS



EACH hour is worth ten in production time when steel plate for our machines, guns, tanks and ships are multiple flame cut by the Airco Oxy-acetylene Flame. Slicing its way through steel and iron, this white hot flame has revolutionized metal fabrication by providing a swift, accurate, economical method of shaping sheets, forgings, castings, structures and pipe. Size and shape which can be cut is practically limitless. A single piece or hundreds of identical pieces can be shaped to amazingly close tolerances. Changes in design require only new blueprints or templets to guide the torch.

Other defense jobs being done by this versatile metal working tool include hardening steel to any degree and depth; welding two or more metal parts into a strong, homogeneous unit; machining metals with unrivaled speed, and cleaning and dehydrating metal surfaces for long lasting paint jobs. To insure greatest speed, efficiency and economy in applying the Airco Oxy-acetylene Flame to defense production, Air Reduction offers industry the cooperation of a complete engineering staff.

To better acquaint you with the many things that this modern production tool does better we have published "Airco in the News", a pictorial review in book form. Write for a copy.

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TAU BETA PI

After a rather severe informal initiation on Wednesday, November 26, the 18 seniors and the 6 honor juniors were inducted into active membership at the formal initiation in the Fort Hayes Hotel on Saturday, December 6.

The evening's program featured by a talk on "The Public Health of a Nation during Stresses of War" by Dr. N. Paul Hudson of the Department of Bacteriology was ably managed by Professor Samuel B. Folk as toastmaster. The "Welcome to the Initiates by President Semmelman, the "Response" by initiate Arnold B. Freeman, and the "Presentation of Prizes" to initiates for work on the bents, the examination, and the essay were awarded by Mr. J. M. Weed, Editor of the Engineering Experiment Station Bulletin.

The new members who were led through the initiation duties by David E. Bowman, Chairman of the Initiation Committee, are:

Seniors: Roger W. Biser, Robert E. Bushong, Albert Caton, Woodrow W. Crissinger, Ralph H. Gloss, David E. James, Herbert C. Jenkins, James C. Malavazos, Charles Marshall, Charles S. Morrison, William G. Muntean, William R. Patton, Samuel A. Riccarde, Thomas S. Shevlin, John D. Sampson, Ellsworth H. Shriver, Donald S. Wason and Donald S. Wilde.

Honor Juniors: Lloyd O. Brown, Arnold B. Freeman, James C. Hogg, Howard K. McFarland, Vernon C. Seguin and William S. Wagner.

TEXNIKOI

Texnikoi continued the tradition initiated last year as it presented its second annual "Extra-curricular Activities" program for the Freshman Engineering Survey Class on Thursday, December 4. This program consisted of brief talks explaining the various campus extra-curricular activities available to engineering college students presented by student leaders of the College of Engineering. Baird Heffron, Representative to the Student Senate, discussed the all campus activities and those centered at the Ohio Union. Clifford Heer, President of the Engineers' Council, described that organization and the various student professional societies. Clyde Kearns, Corresponding Secretary of Tau Beta Pi and President of the Student Branch of A.I.Ch.E. elaborated upon the activities and requirements for membership of Tau Beta Pi and the departmental Honorary organizations. Ellsworth Shriver displayed samples of the wares of Quadrangle Jesters and Don Arnold gave his views of the opportunities in the staff of The Ohio State Engineer. The meeting was concluded with the words of Ivan Spraitzar on the sponsor of the program, Texnikoi, and the introduction of the chairman of the program, John Semmelman as the President of the Senior Class of 1942.

Plans for the selection of the junior and senior members and the subsequent traditional "Tapping Ceremonies" for the Engineers' Prom were initiated. Application forms for membership will be passed to all those interested in the organization in the first part of January. From these, the new members will be selected, and then informed of the selection by a tapping at the Prom.

The organization is working in conjunction with the Engineers' Council in planning the Prom.

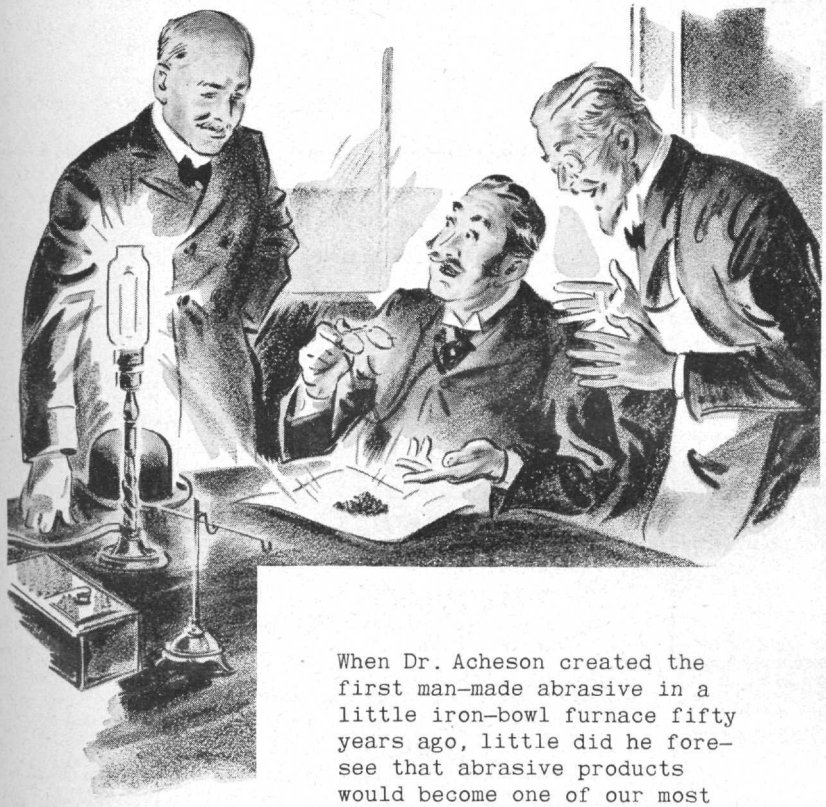
ENGINEERS' COUNCIL

Engineers' Council has been active all quarter. Officers for the current year are Clifford Heer, president; Edwin Willing, vice-president; Walter Hendricks, secretary-treasurer.

First important activity was the participation in the campus elections. Engineers' Council took an active part in the All Campus Combine which elected the Senior Class President and the Homecoming Queen.

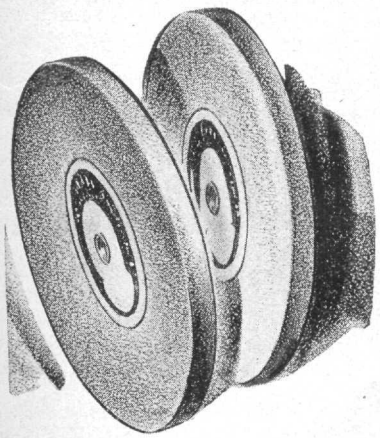
Plans for the Engineers' Prom have been under way for some time now in an effort to make the prom a bigger and better affair this year. February 6, the first Friday in February, has been selected as the date of the prom.

Was $880.00 a pound...NOW 16¢!



"You really made these crystals in an electric furnace?" the gem expert asked. "They look as if they'd been in the earth a million years!" "Certainly I made them", said Dr. Acheson. "And all I ask is that you crush them and try them instead of diamond dust for gem polishing." The expert did...and placed an order at $880 a pound! Today this same Carborundum Brand Silicon Carbide serves all industry, sells in grain form for as little as 16¢ a pound.

When Dr. Acheson created the first man-made abrasive in a little iron-bowl furnace fifty years ago, little did he foresee that abrasive products would become one of our most important production tools... that one day they would be used in the grinding, finishing, shaping and polishing of practically all the products of all industry.



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